REMARKS

Claims 1-25 are pending in the application. Claims 1-18, 21, and 22 are allowed. Claims 19, 20, and 23-25 stand rejected and are at issue herein. Reconsideration of the rejection of claims 19, 20, and 23-25 and indication of their allowability are therefore respectfully solicited.

This Office Action has been made final by the Examiner as indicated on the Office Action summary sheet. However, the Examiner has set forth a new ground of rejection for originally filed and previously unamended claims 23-25. Indeed, since the new ground of rejection of these originally filed and unamended claims 23-25 was not necessitated by any amendment of these claims nor based on information submitted in an Information Disclosure Statement submitted by the Applicant, the Applicant respectfully submits that the finality of this Office Action is premature under M.P.E.P. § 706.07(a). As such, the Applicant respectfully requests withdrawal of the finality of this rejection.

The Examiner has indicated that the substitute Specification filed 11 August 2003 has not been entered because it does not conform to 37 C.F.R. 1.125(b) and (c) because a marked-up version of the substitute Specification showing the changes to the original Specification was not attached. However, as pointed out by the Applicant in the response filed 11 August 2003, there are no changes in the substitute Specification other than adding paragraph numbers, which do not constitute a change under the rules, and correcting a printer error in the printing of mathematical symbols. That is, in the originally filed application, there was a printer incompatibility problem that resulted in various mathematical symbols being printed as various icons including diamonds, spades, hearts, clubs, etc. Since this printer incompatibility problem has been resolved, the original electronic file now prints correctly utilizing the correct mathematical symbols. In other words, Applicants are unable to duplicate the printer incompatibility problem and thus cannot provide a Specification showing that there has been any changes thereto. Therefore, the Applicants have submitted herewith a copy of the originally filed application that contains the mathematical equations which were not properly printed due to the printer compatibility problem with redline markup showing where this incompatibility has resulted in spurious symbols being printed by the printer. The Applicants have also included herewith a replacement Specification that has been printed on a printer without a compatibility problem, and which utilizes the paragraph numbering as suggested by the Patent Office. No other "changes" have been made to the Specification other than correcting the printer incompatibility problem that did not allow the originally filed application to be printed with the mathematical symbols. As such, the

Applicant respectfully submits that this marked-up Specification complies to the rules as best the Applicant is able, and respectfully requests entry of the substitute Specification. This substitute Specification contains no new matter.

The Examiner has rejected claims 19, 20, and 23-25 under 35 U.S.C. § 102(e) as being anticipated by Lippincott (U.S. Patent No. 6,459,825). The Applicant has fully considered the Lippincott '825 reference and the Examiner's rationale for application thereof against these claims, but must respectfully traverse this ground of rejection. Reconsideration of this ground of rejection in view of the following remarks and indication of the allowability of claims 19, 20, and 23-25 are respectfully solicited.

The Lippincott '825 reference teaches a method for automatic control of photo capture and scanning that provides image capture at the highest quality image resolution and fidelity possible. This goal is achieved by closely matching the current image scanner device capabilities with the current photo media being scanned. This matching is performed so that the unique optical sampling and color correction required by the type of film being scanned can be achieved through optimal selection of the scanner equipment device-dependent properties, including aperture lens and sensor array controllability. Lippincott '825, column 4, lines 44-55.

The scanner control of Lippincott '825 utilizes artificial intelligence information derived by sensing through a pre-scan the photo media from which the image is to be scanned. From this information derived in a pre-scan, control information for that type of film media is then selected from a photo media property knowledge base. The scanner settings to be used to scan this type of photo media are then read from the Scanner Device Properties configuration software for the particular type of scanning device being used. Once the photo media custom requirements are matched to the available Scanner Device Properties and provided as control information to the scanner to control optical resolution, custom color compensation, and scanner sample rate, a scan is then physically commanded. This scan returns as raw data the highest optical and color fidelity correct scan possible for both the scanner equipment and the media. This raw scanner data is formatted via the data manager and the scan is recorded, stored, or passed to other equipment. See Lippincott '825, column 5, line 54-column 6, line 5.

Of importance, column 8 beginning at line 32 of Lippincott '825 describes this Scanner Control process with reference to Figure 2. This section describes that the image acquisition process begins by selection of the type of scanner and a request to scan received from a user interface. The selected scanner's characteristics are then obtained from the Scanner Device Properties routine. Once the Scanner Device Properties have been retrieved,

the scanner then performs a high-speed pre-scan. Based on this high-speed pre-scan, the Photo Media Properties for the media being scanned are retrieved. Specifically, the results of this high-speed pre-scan are exposed to a histogram and exposure analysis described beginning at line 59 of column 8 and illustrated in FIG. 7. Once the histogram analysis is complete, a match of media groups is determined. If there is no exact match with the closest fit Photo Media Property setting, the custom color match then processes it. Here the selected photo media's idealized color control curve is computed for deviations from the samples' corrected histogram control points. Offset differences are calculated for these differences in the same normalized (0-1) scale across the entire curve. The closest match Photo Media Properties Color Index Table is then modified by stretching, interpolating the original points of the index table or calibrated media correction to pass through the actual new scan sample control points. See Lippincott, column 8, line 59-column 9, line 33.

Once these Photo Media Properties are matched or derived, they are formatted for the specific available scanner-specific parameters. Now pre-initialized with the optimized control parameters, optimized accurate scan data is then returned directly from the scanner digital image capture. In other words, once the scanner has been pre-initialized based on the photo media being scanned (as determined by the high-speed pre-scan) and the control parameters of the scanner itself, such as mechanically native optical resolution and other physical scanner attributes, a scan of the image is then performed. This raw scanner data is not corrected in any way as it is already of the "highest optical and color fidelity" possible for both the scanner equipment and the particular type of media being scanned. Lippincott '825, column 6, lines 1-3.

As is apparent from the foregoing and an analysis of Lippincott '825, the raw data obtained from the scan of the image is not color-compensated in any way. Instead, Lippincott '825 focuses on matching the scanner physical properties with the properties of the type of media being scanned. Unlike the system of Lippincott '825, independent claim 19 claims a method of achieving high-color fidelity in a digital image capture device by capturing color data from an image, normalizing the color data to both black and white, and compensating the normalized color data with a compensation matrix in the color space of the capture device. However, Lippincott '825 does not normalize or compensate the raw scan data at all since the scanning properties of the scanning device have already been matched to the type of image media being scanned. These distinctions are made clear in comparing FIG. 5 of the instant application to FIG. 2 of Lippincott '825.

Specifically, FIG. 2 of Lippincott '825 shows that the output from the acquisition control block 96 is the accurate scan data 98. However, with reference to FIG. 5 of the

instant application, the output of the scanner 172 is the raw RGB data 174. This raw data 174 is then normalized in block 176, and the image data is then compensated with a compensation matrix in block 180. The system of Lippincott '825 performs pre-scan calibration and matching of the photo media being scanned and the scanner physical properties so that the scan of the photo media is accurate when the scan is performed. In contrast, the data acquired by the scan of the image in the present invention must be normalized and compensated after the scan has been performed. This significant departure in color calibration approaches clearly differentiates these inventions, and precludes the application of this reference against independent claim 19. As such, the Applicant respectfully requests reconsideration of this ground of rejection.

Dependent claim 20 further comprises the step of converting the compensated normalized color data from a color space of the capture device to a device independent color space. However, as discussed above, other than data formatting there is no processing of the output raw scan data described in Lippincott '825. Indeed, this reference describes that the scanner itself "returns as raw data the highest optical and color fidelity correct scan possible for both the scanner equipment and the media." While Lippincott does describe that this scan may be passed (communicated) to other equipment in column 6, lines 3-5, Lippincott '825 does not describe any transformation of this scan data into a device independent color space. Therefore, Lippincott '825 cannot be used to anticipate claim 20 for this additional reason. Reconsideration of this ground of rejection and indication of the allowability of claim 20 are therefore respectfully solicited.

Independent claim 23 claims a digital image capture device comprising a memory storage element having stored therein "a compensation matrix calculated as a regression of normalized raw color data from a test target and normalized measurement data from the test target converted to the color space of the capture device." To satisfy this quoted limitation the Examiner has pointed to column 9, lines 23-33 of Lippincott '825. However, an analysis of this section reveals that a Photo Media Properties Color Index Table is modified "by stretching, interpolating" the original points of the index table. Neither stretching an index table nor interpolating points within an index table constitutes a mathematical regression as required by claim 23.

Further, the information used to stretch or interpolate the data points in the Color Index Table is derived from a histogram analysis. There is no disclosure or suggestion of the generation of a compensation matrix that is calculated as a regression of normalized raw color data from a test target and normalized measurement data from the test target converted to the color space of the capture device. Instead, the differences from the histogram analysis

of the raw pre-scan data is compared to normalized absolute measurement data from a test target. As such, the Applicant respectfully submits that Lippincott '825 does not anticipate independent claim 23 as it fails to utilize a compensation matrix calculated as a regression of normalized raw color data from a test target and normalized measurement data from the test target converted to the color space of the capture device. Reconsideration of this ground of rejection and indication of the allowability of claim 23 are therefore respectfully solicited.

Claim 24 further requires a processing means for normalizing captured color data of an image to black and white, and further compensating the normalized captured color data with the compensation matrix to achieve high color fidelity. As discussed above, however, Lippincott '825 does not process the raw data output from the scanner in any way to achieve high color fidelity. Instead, once the scanner physical properties are matched to the type of photo media being scanned prior to scanning the image, Lippincott '825 states that the raw data output from the scanner is already of the highest optical and color fidelity correct possible for both the scanner equipment and the media. Claim 24, however, requires post processing of the captured color data of an image to achieve such high color fidelity. Indeed, the raw data returned from the scanner must first be normalized to black and white and further compensated with the compensation matrix to achieve the high color fidelity. This post scan raw data processing is completely foreign to the teachings of Lippincott '825. As such, the Applicant respectfully submits that claim 24 is not anticipated by Lippincott '825. Reconsideration of this ground of rejection and indication of the allowability of claim 24 are therefore respectfully solicited.

Claim 25 requires that the processing means further convert the compensated normalized color data from a color space of the capture device to a device independent of color space. However, as discussed above, Lippincott '825 does not discuss the conversion of the image data from a color space of the scanner to a device independent color space. Lippincott '825 does state that the scan may be communicated to other equipment. However, it makes no reference of any conversion of this raw data into a device independent color space prior to such communication. As such, Lippincott '825 cannot anticipate this claim. The Applicant therefore respectfully requests reconsideration of this ground of rejection and indication of the allowability of claim 25.

In view of the above the Applicant respectfully submits that claims 1-25 are in condition for allowance, claims 1-18 and 21-22 having previously been indicated as allowable over the prior art. Reconsideration of this application and indication of the allowability of claims 1-25 at an early date are respectfully solicited.

Should the Examiner believe that a telephonic conversation will aid in the resolution of any issues not resolved herein, the Examiner is invited to contact the Applicant's attorney at the telephone number listed below.

Respectfully submitted,

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